

# Anthropometric Data Variation within Gari-Frying Population

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## Abstract

The imperative of anthropometry in designing to fit cannot be overemphasized. Of essence is the variability of measurements among population for which data is collected. In this paper anthropometric data were collected for the design of gari-frying facility such that work system would be designed to fit the gari-frying population in the Southwestern states of Nigeria comprising Lagos, Ogun, Oyo, Osun, Ondo and Ekiti. Twenty-seven body dimensions were measured among 120 gari-frying processors. Statistical analysis was performed using SPSS package to determine the mean, standard deviation, minimum value, maximum value and percentiles (2<sup>nd</sup>, 5<sup>th</sup>, 25<sup>th</sup>, 50<sup>th</sup>, 75<sup>th</sup>, 95<sup>th</sup> and 98<sup>th</sup>) of the different anthropometric parameters. One sample t-test was conducted to determine the variation within the population. The 50<sup>th</sup> percentiles of some of the anthropometric parameters were compared with those from other populations in literature. The correlation between the worker's age and the body anthropometry was also investigated. The mean weight, height, shoulder height (sitting), eye height (standing) and eye height (sitting) are 63.37kg, 1.57m, 0.55m, 1.45m and 0.67m respectively. Result also shows a high correlation with other populations and a statistically significant difference in variability of data within the population in all the body dimensions measured. With a mean age of 42.36 years, results shows that age will be a wrong indicator for estimating the anthropometry for the population.

## Keywords

Anthropometry, workstation design, gari-frying, cassava processing, design to fit